

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for producing a peptide having three or more amino acid residues, comprising:

forming the peptide having three or more amino acid residues with an enzyme or enzyme-containing substance,

wherein the enzyme or enzyme-containing substance has an ability to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component;

wherein said carboxy component is an amino acid ester or an amino acid amide;

wherein said amine component is selected from the group consisting of an unprotected peptide having two or more amino acid residues, a C-protected peptide having two or more amino acid residues, and a peptide having two or more amino acid residues and having a C-terminal amine in place of an amino acid;

wherein said carboxy component has an unprotected amino group;

wherein said peptide having three or more amino acid residues contains an amino acid residue derived from said carboxy component at the N-terminus thereof; and

wherein the enzyme or enzyme in said enzyme-containing substance is selected from the group consisting of

a protein having ~~an~~ the amino acid sequence consisting of amino acid residues numbers 21 to 619 of ~~an~~ the amino acid sequence described in SEQ ID NO: 12,

a protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of ~~one or~~ one to ten of amino acids in the amino acid sequence consisting of amino acid residues 21 to 619 of the amino acid sequence described in SEQ ID NO: 12,

a protein having ~~an~~ the amino acid sequence described in SEQ ID NO: 12,

a protein containing a mature protein region, the protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of ~~one or~~ one to ten of amino acids in the amino acid sequence described in SEQ ID NO: 12,

a product of a microbe that has been transformed so as to express a protein encoded ~~by a~~ by the polynucleotide consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11, and

~~a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence complementary to the nucleotide sequence consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and encodes a protein that has a peptide-forming activity, wherein said stringent conditions comprise hybridizing at 60°C in a salt concentration corresponding to 0.1×SSC and 0.1% SDS,~~

a product of a microbe that has been transformed so as to express a protein encoded ~~by a~~ by the polynucleotide consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11, and

~~a product of a microbe that has been transformed so as to express a protein encoded by a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence complementary to the nucleotide sequence consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and encodes a protein that has a peptide-forming activity, wherein said stringent conditions comprise hybridizing at 60°C in a salt concentration corresponding to 0.1×SSC and 0.1% SDS.~~

2. – 5. (Canceled)

6. (Currently Amended) The method for producing a peptide according to claim 1, wherein said enzyme is a protein selected from the group consisting of:

a protein having ~~an~~ the amino acid sequence consisting of amino acid residues numbers 21 to 619 of ~~an~~ the amino acid sequence described in SEQ ID NO: 12, and

a protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of ~~one or~~ one to ten of amino acids in the amino acid sequence consisting of amino acid residues 21 to 619 of the amino acid sequence described in SEQ ID NO: 12.

7. (Canceled)

8. (Currently Amended) The method for producing a peptide according to claim 1, wherein said enzyme is a protein selected from the group consisting of:

a protein having ~~an~~ the amino acid sequence described in SEQ ID NO: 12, and

a protein containing a mature protein region, the protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of ~~one or~~ one to ten of amino acids in the amino acid sequence described in SEQ ID NO: 12.

9. (Previously Presented) The method for producing a peptide according to claim 1, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

10. (Canceled)

11. (Currently Amended) The method for producing a peptide according to claim 1, wherein said enzyme is a product of a microbe that has been transformed so as to express a protein encoded ~~by a~~ by the polynucleotide ~~selected from the group consisting of:~~

~~a polynucleotide consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11, and~~

~~a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence complementary to the nucleotide sequence consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and encodes a protein that has a peptide-forming activity;~~

~~wherein said stringent conditions comprise hybridizing at 60°C in a salt concentration corresponding to 0.1×SSC and 0.1% SDS.~~

12. (Canceled)

13. (Currently Amended) The method for producing a peptide according to claim 1, wherein said enzyme is a product of a microbe that has been transformed so as to express a protein encoded ~~by a~~ by the polynucleotide ~~selected from the group consisting of:~~

~~a polynucleotide consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11, and~~

~~a polynucleotide that hybridizes with a polynucleotide consisting of a nucleotide sequence complementary to the nucleotide sequence consisting of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11 under stringent conditions, and encodes a protein that has a peptide-forming activity;~~

~~wherein said stringent conditions comprise hybridizing at 60°C in a salt concentration corresponding to 0.1×SSC and 0.1% SDS.~~

14. (Previously Presented) The method for producing a peptide according to claim 1, wherein the carboxy component comprises at least one amino acid ester selected from the group consisting of an L-alanine ester, a glycine ester, an L-threonine ester, an L-tyrosine ester and a D-alanine ester.

15. (Previously Presented) The method for producing a peptide according to claim 6, wherein said enzyme is a protein having the amino acid sequence consisting of amino acid residues 21 to 619 of SEQ ID NO: 12.

16. (Previously Presented) The method for producing a peptide according to claim 6, wherein said enzyme is a protein having an amino acid sequence including substitution, deletion, insertion, and/or addition of one to ten amino acids in the amino acid sequence consisting of amino acid residues 21 to 619 of SEQ ID NO: 12.

17. (Previously Presented) The method for producing a peptide according to claim 8, wherein said enzyme is a protein having the amino acid sequence consisting of SEQ ID NO: 12.

18. (Previously Presented) The method for producing a peptide according to claim 8, wherein said enzyme is a protein containing a mature protein region, the protein having an

amino acid sequence including substitution, deletion, insertion, and/or addition of one to ten amino acids in the amino acid sequence of SEQ ID NO: 12.

19. (Currently Amended) The method for producing a peptide according to claim 11, wherein said enzyme is a protein which is a product of a microbe that has been transformed so as to express a protein encoded ~~by a~~ by the polynucleotide consisting of nucleotides 121 to 1917 of the nucleotide sequence of SEQ ID NO: 11.

20. (Canceled)

21. (Currently Amended) The method for producing a peptide according to claim 13, wherein said enzyme is a protein which is a product of a microbe that has been transformed so as to express a protein encoded ~~by a~~ by the polynucleotide that consists of nucleotides 61 to 1917 of the nucleotide sequence of SEQ ID NO: 11.

22. (Canceled)

23. (Previously Presented) The method for producing a peptide according to claim 11, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

24. (Previously Presented) The method for producing a peptide according to claim 13, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

25. (Previously Presented) The method for producing a peptide according to claim 19, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

26. (Previously Presented) The method for producing a peptide according to claim 20, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

27. (Previously Presented) The method for producing a peptide according to claim 21, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

28. (Previously Presented) The method for producing a peptide according to claim 22, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.